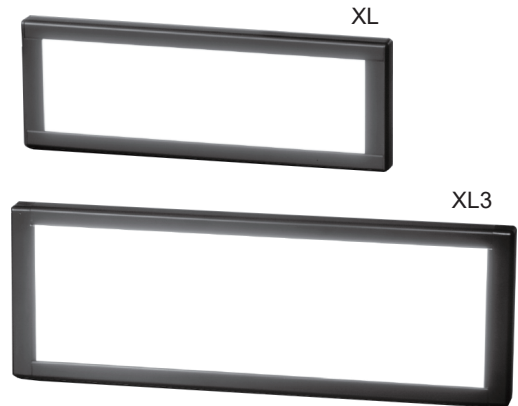


Easy to mount everywhere,
with bracket or magnet sheet.

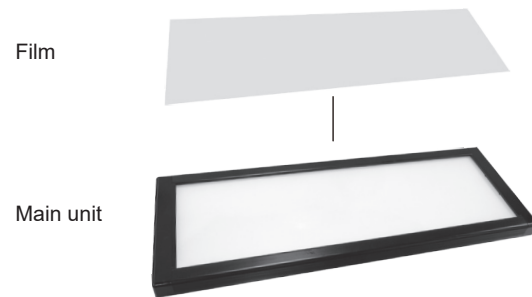
- Display surface : XL 60×210 mm, XL3 86×278 mm
(External dimension : XL 84×240 mm, XL3 110×310 mm)
- Thickness : Only 14 mm
- Terminal : Wire harness, AC Adapter DC Jack and wire harness
- Mounting : Bracket, Magnet sheet
- Illumination type : Full-Face, Dual-Color



CHARACTERISTICS

	XL	XL3
Display Surface Size	60×210 mm	86×278 mm
Illumination Color	Red, Yellow, Super Blue, Super White, Super Green	
Illumination Type	Full Face, Dual Color	
Supply Voltage	DC 12 V, 24 V ± 5%	
Consumption Current	120 mA max.	210 mA max.
Terminal Shape	Wire harness, AC Adapter, DC Jack and wire harness	
Insulation Resistance	More than 100 MΩ at DC 500 V	
Dielectric Strength	AC 1500 V RMS between terminals and ground 50/60 Hz 60 sec. at normal ambient temperature and humidity	
Peak Reverse Voltage	150 V	
Ambient Operating Temperature	-10°C to 40°C (No Freeze, No Condensation)	
Ambient Operating Humidity	45 to 80%RH max.(No Condensation)	
Ambient Storage Temperature	-25°C to 65°C (No Freeze, No Condensation)	
Ambient Storage Humidity	85%RH max. (No Condensation)	
RoHS (10 Substances)	Conform to standards	

STRUCTURE



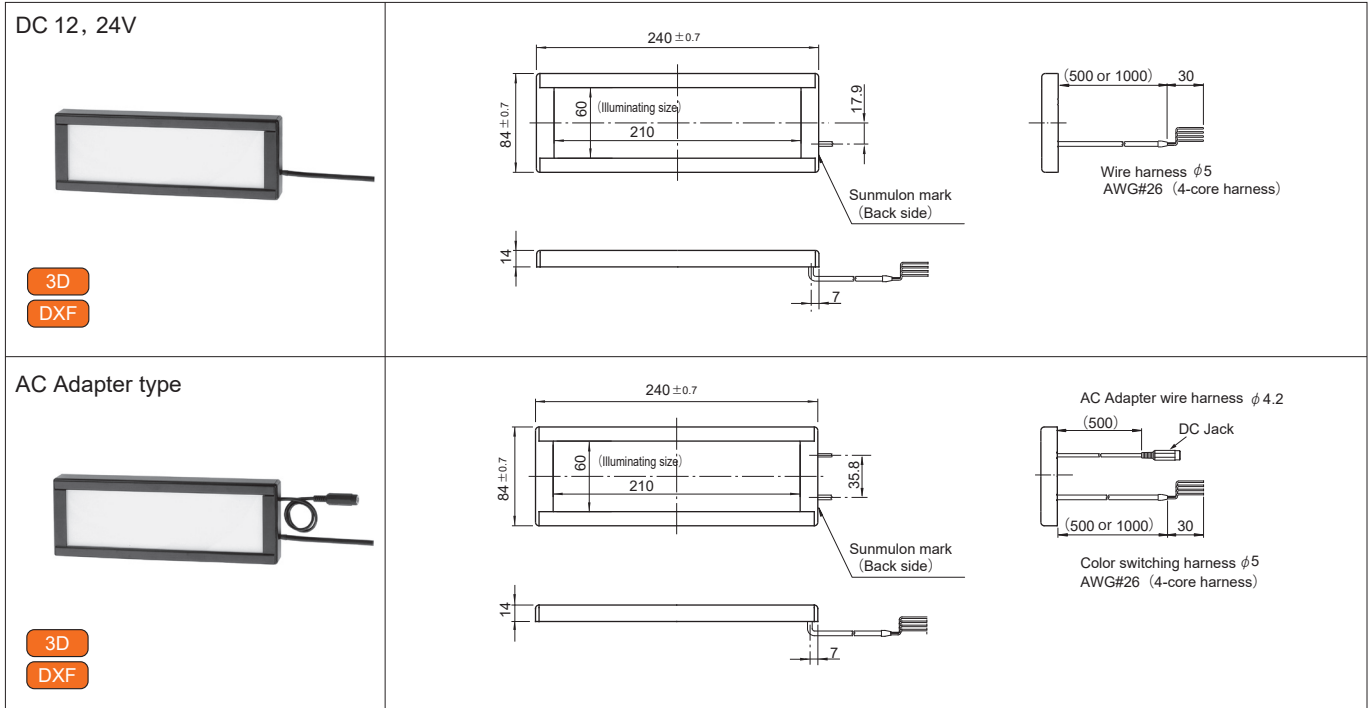
https://www.sunmulon.co.jp/english/products/switch_e/xl.html



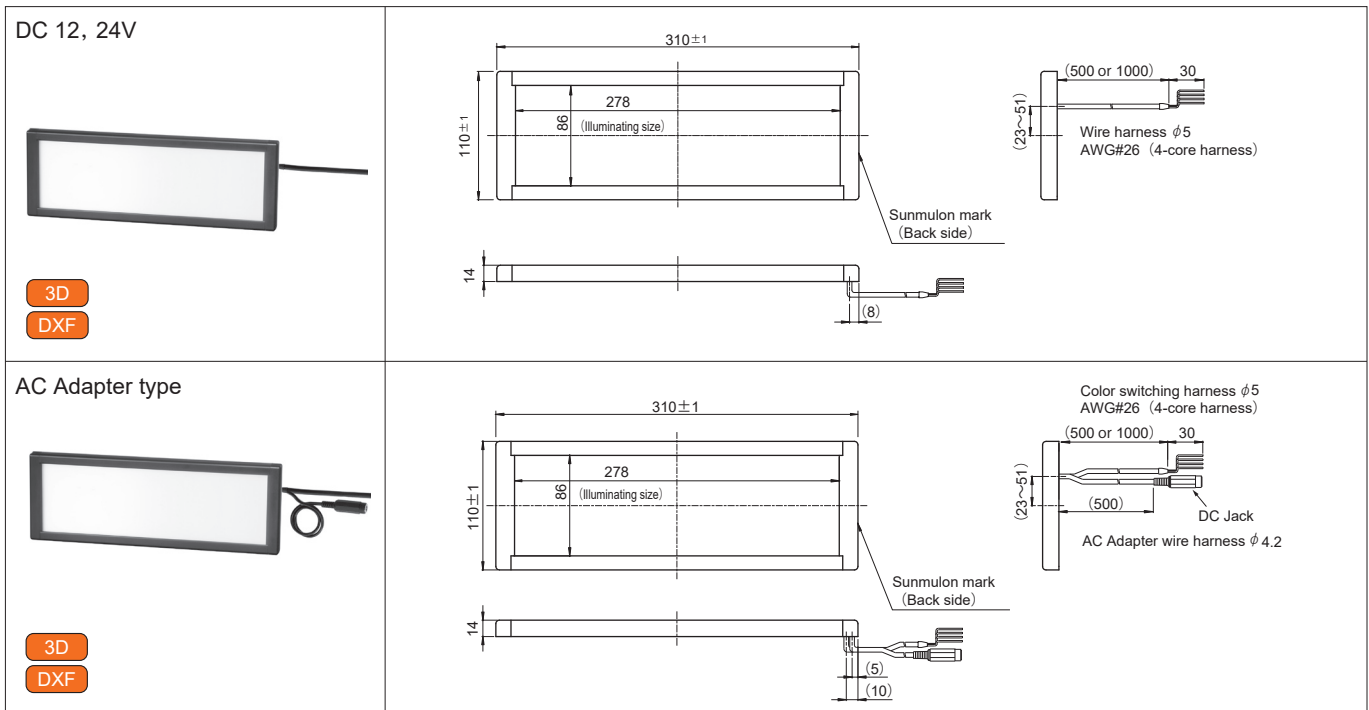
◇Dimensions : page XL·XL3-2 ◇Accessories : page XL·XL3-3 ◇Ordering code : page XL·XL3-4~5
 ◇Internal connection arrangements : page XL·XL3-7~9 ◇LED specifications : page XL·XL3-10 ◇Mounting instruction : page XL·XL3-11

DIMENSIONS

● XL




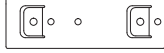
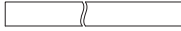

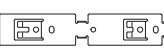
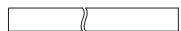

● XL3



3D・DXF data download site : <https://www.sunmulon.co.jp/download/>

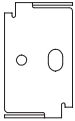
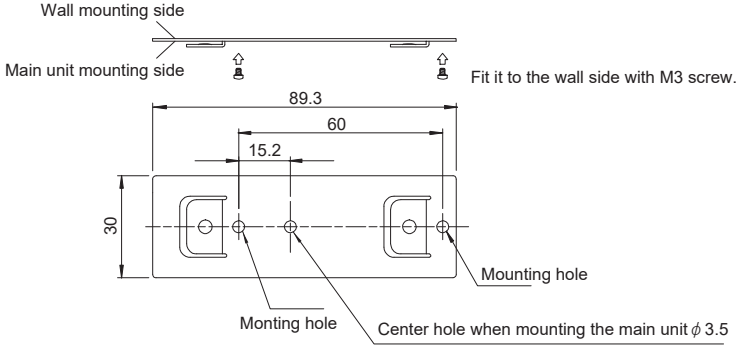
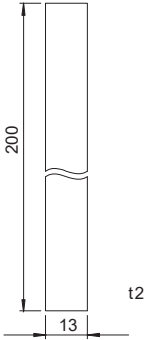
Tolerance : ± 0.4 mm

ACCESSORIES

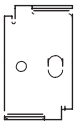
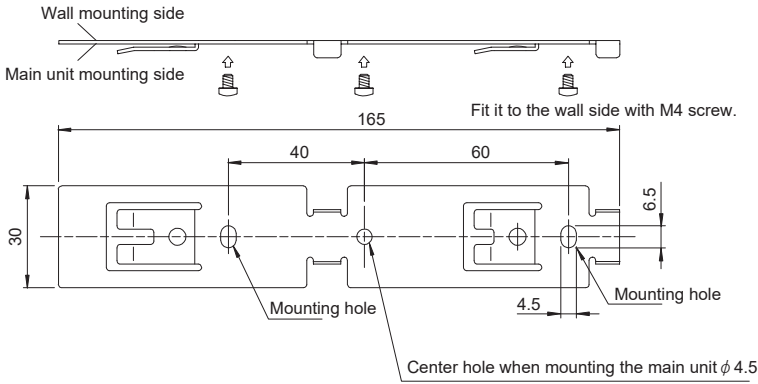
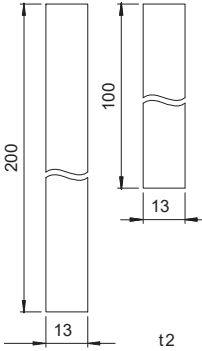
Name	Appearance	Classification	Part no.	Precautions for use
XL		Mounting bracket	XL-1301	- Set of 2 mounting brackets and 1 mounting plate.
		Mounting plate		
		Magnet sheet	XL-1302	
XL3		Mounting bracket	XL-1455	- Set of 2 mounting brackets and 1 mounting plate.
		Mounting plate		
	 large  small	Magnet sheet	XL-1454	

DXF

● XL

Mounting parts		Magnet sheet
Mounting bracket	Mounting plate	
		
SECC t0.8	SECC t0.8	
Part no. : XL-1301 (Set of 2 mounting brackets and 1 mounting plate)		Part no. : XL-1302 (Set of 2 sheets)

● XL3

Mounting parts		Magnet sheet
Mounting bracket	Mounting plate	
		
SECC t0.8	SECC t1	
Part no. : XL-1455 (Set of 2 mounting brackets and 1 mounting plate)		Part no. : XL-1454 (Set of 2 each large and small)

ORDERING CODE 【Full-Face】

Assembled Part

XL - W0

● **SIZE**

Blank	240mm × 84mm
3	310mm × 110mm

● **ILLUMINATION**

W0	Full-Face
----	-----------

● **LED COLOR**

7	Red
9	Yellow
14	Super Blue
16	Super White
18	Super Green

Yellow (9) is actually "ORANGE Yellow" not Lemon Yellow.

● **FLAME COLOR**

K	Black
F	Ivory

● **WIRE HARNESS LENGTH**

W1	500mm
W2	1000mm

Length of 4-core harness

● **MOUNTING ACCESSORY**

1	Mounting parts
2	Magnet sheet
X	Not needed

To be appended

● **SUPPLY VOLTAGE**

2	DC12V
3	DC24V
A	AC Adapter type ※1)

● **NOTES**

- ※1) Low brightness is not available for AC Adapter type.
Two wire harness are attached, one for color change and the other for AC adapter connection with DC jack fixed length 500mm.
Main unit is DC 12V type.
We do not sell AC adapter, so please prepare your own.

◇Dimensions : page XL·XL3-2	◇Accessories : page XL·XL3-3	◇Ordering code : page XL·XL3-4~5
◇Internal connection arrangements : page XL·XL3-7~9	◇LED specifications : page XL·XL3-10	◇Mounting instruction : page XL·XL3-11

ORDERING CODE [Dual-Color]

Assembled Part

XL - W3 1 2

● **SIZE**

Blank	240mm × 84mm
3	310mm × 110mm

● **ILLUMINATION**

W3	Dual-Color
----	------------

● **LED COLOR**

7	Red	Put the color numbers into frame 1 and 2. (Dual-Color combination) 714, 718, 1418
14	Super Blue	
18	Super Green	

● **FLAME COLOR**

K	Black
F	Ivory

● **WIRE HARNESS LENGTH**

W1	500mm
W2	1000mm

Length of 4-core harness

● **MOUNTING ACCESSORY**

1	Mounting parts
2	Magnet sheet
X	Not needed

To be appended

● **SUPPLY VOLTAGE**

2	DC12V
3	DC24V
A	AC Adapter type ※1)

● **NOTES**

- ※1) Low brightness and simultaneous lighting is not available for AC Adapter type.
Two wire harness are attached, one for color change and the other for AC adapter connection with DC jack fixed length 500mm.
Main unit is DC 12V type.
We do not sell AC adapter, so please prepare your own.

◇Dimensions : page XL·XL3-2

◇Accessories : page XL·XL3-3

◇Ordering code : page XL·XL3-4~5

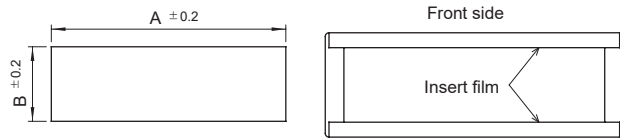
◇Internal connection arrangements : page XL·XL3-7~9

◇LED specifications : page XL·XL3-10

◇Mounting instruction : page XL·XL3-11

RECOMMENDED SIZE OF INSERTING FILM

● FILM (PET t=0.1)



Model	A	B
XL	209.8	75.8
XL3	278	96.5

The film is incorporated into the front of the product upon delivery. This film is for marking and is not a protective film.

If marking on the film, please use the built-in film or replace it with a separately prepared film.

When preparing a separate film, use a heat-resistant film of 0.1mm or less in thickness. Refer to the above figure for dimensions.

The film should be inserted into the gap in the frame shown above.

Films are not sold separately.

INTERNAL CONNECTION ARRANGEMENTS

● Full-Face

XL	DC 12V	<p>● All Color</p>
	DC 24V	<p>● Red · Yellow</p> <p>● Super Blue · Super White · Super Green</p>
	AC Adapter type	<p>● All Color (Standard brightness)</p>

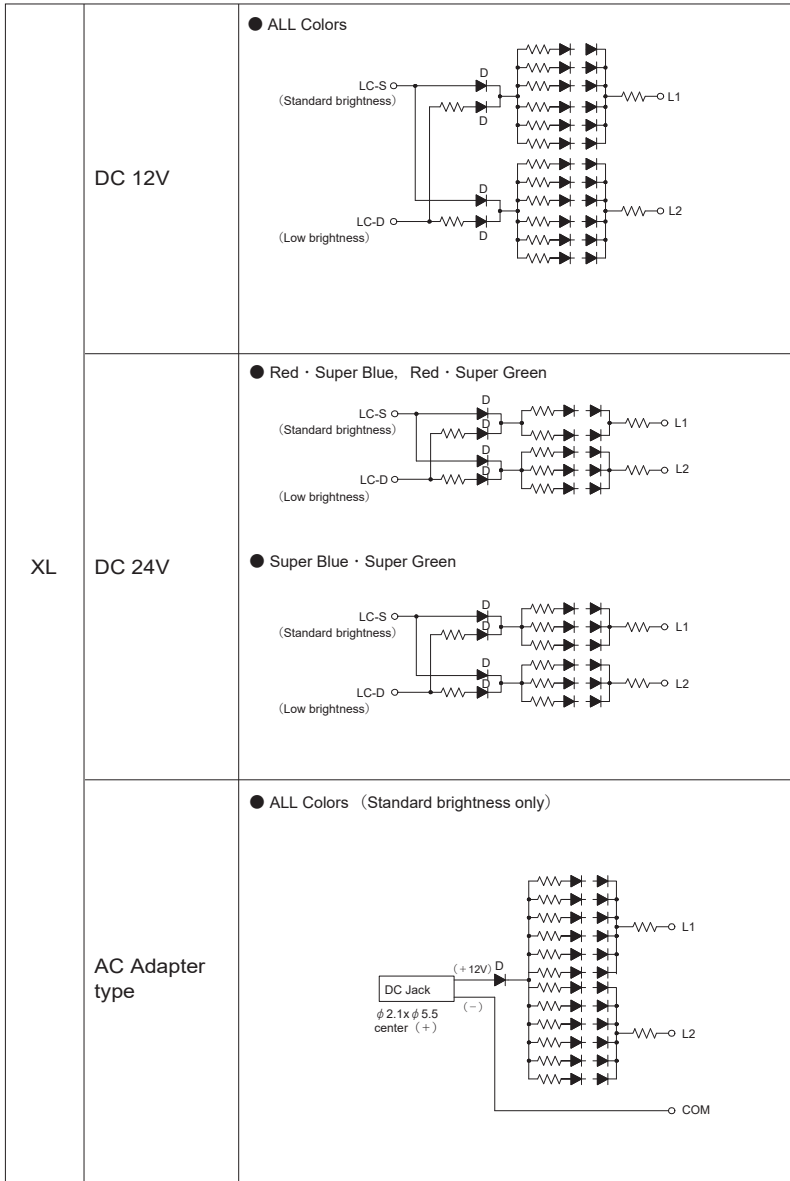
XL3	DC 12V	<p>● Except for Super White</p>	<p>● Super White</p>
	DC 24V	<p>● Red · Yellow</p> <p>● Super Blue · Super Green</p>	<p>● Super White</p>
	AC Adapter type	<p>● Except for Super White (Standard brightness)</p>	<p>● Super White (Standard brightness)</p>

● The connection of AC Adapter type

- Use with DC 12V 1A or more output, center (+) $\phi 2.1 \times \phi 5.5$
- AC Adapter is not included.
- We do not sell AC Adapter, so please prepare your own.
- Power should be supplied from the AC Adapter. Use the color switching harness to switch the lighting.

INTERNAL CONNECTION ARRANGEMENTS

● Dual-Color



● The connection of AC Adapter type

- Use with DC 12V 1A or more output, center (+) $\phi 2.1 \times \phi 5.5$
- AC Adapter is not included.
- We do not sell AC Adapter, so please prepare your own.
- Power should be supplied from the AC Adapter. Use the color switching harness to switch the lighting.

● Dual-Color combination

DC 12V, 24V

Terminals	LED Color		
LC-S-L1	Red	Red	Super Green
LC-S-L2	Super Blue	Super Green	Super Blue

※ For simultaneous lighting, use the + side on LC-D (Low brightness) side.

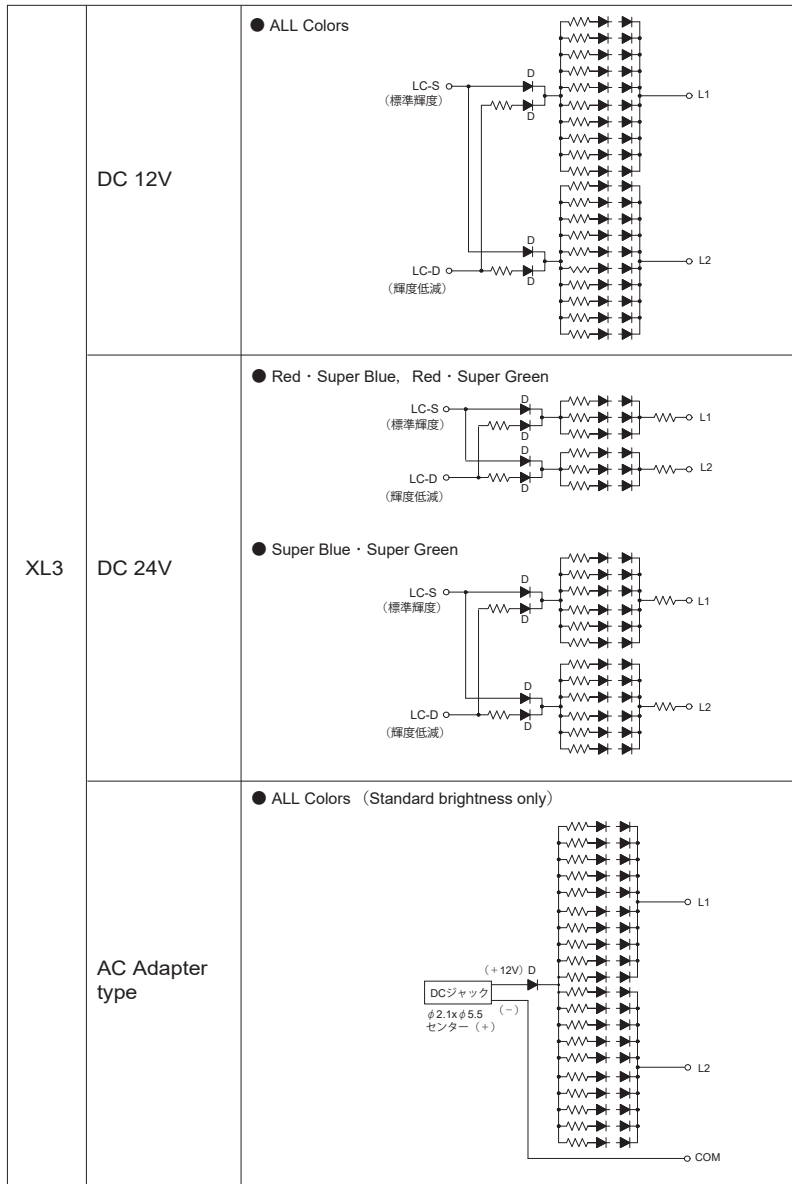
AC Adapter type

Terminals	LED Color		
COM-L1	Red	Red	Super Green
COM-L2	Super Blue	Super Green	Super Blue

※ Low brightness and simultaneous lighting is not available.

INTERNAL CONNECTION ARRANGEMENTS

● Dual-Color



● The connection of AC Adapter type

- Use with DC 12V 1A or more output, center (+) $\phi 2.1 \times \phi 5.5$
- AC Adapter is not included.
- We do not sell AC Adapter, so please prepare your own.
- Power should be supplied from the AC Adapter. Use te color switching harness to switch the lighting.

● Dual-Color combination

DC 12V, 24V

Terminals	LED Color		
LC-D-L1	Red	Red	Super Green
LC-D-L2	Super Blue	Super Green	Super Blue

※ For simultaneous lighting, use the + side on LC-D (Low brightness) side.

AC Adapter type

Terminals	LED Color		
COM-L1	Red	Red	Super Green
COM-L2	Super Blue	Super Green	Super Blue

※ Low brightness and simultaneous lighting is not available.

LED SPECIFICATIONS

● Full-Face

Part no.	Voltage	Rated Current (mA)									
		Standard brightness					Low brightness				
		Red	Yellow	Super Blue	Super White	Super Green	Red	Yellow	Super Blue	Super White	Super Green
XL	DC 12V ± 5%	115	110	100	80	100	70	70	40	50	40
	DC 24V ± 5%	40	40	50	40	50	20	20	25	25	25
	AC Adapter type AC 100V	25	25	25	25	25					
XL3	DC 12V ± 5%	200	200	200	100	200	120	120	70	60	70
	DC 24V ± 5%	60	60	120	50	120	40	40	60	30	60
	AC Adapter type AC 100V	50	50	50	25	50					

● Dual-Color

Part no.	Voltage	Rated Current (mA)												
		Standard brightness					Low brightness					Simultaneous lighting (Low brightness only)		
		Red	Yellow	Super Blue	Super White	Super Green	Red	Yellow	Super Blue	Super White	Super Green	Red · Super Blue	Red · Super Green	Super Blue · Super Green
XL	DC 12V ± 5%	115	110	100	80	100	70	70	40	50	40	110	110	80
	DC 24V ± 5%	40	40	50	40	30	20	20	25	25	20	45	40	50
	AC Adapter type AC 100V	25	25	25	25	25								
XL3	DC 12V ± 5%	200	200	200	100	200	120	120	70	60	70	190	190	140
	DC 24V ± 5%	60	60	120	50	70	40	40	60	30	50	100	90	120
	AC Adapter type AC 100V	50	50	50	25	50								
Precautions for lighting		For Simultaneous lighting with DC12V and DC 24V, use the + side on LC-D (Low brightness) side. Low brightness and simultaneous lighting are not available for AC Adapter type.												

WIRE HARNESS / WIRING

● DC 12 , 24V

Wire harness : UL1007 AWG#26

Wire harness Color	Brown	Red	Orange	Yellow
Terminal	LC-S (+) Standard brightness	LC-D (+) Low brightness	L1 (-)	L2 (-)

● AC Adapter type

Wire harness : UL1007 AWG#26

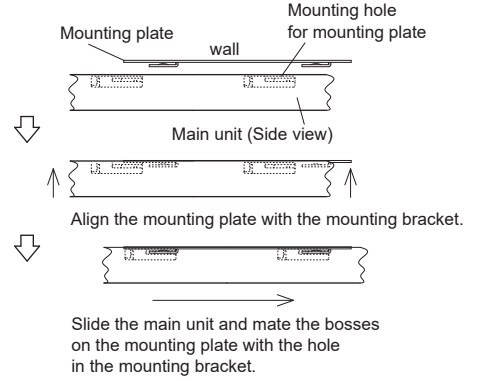
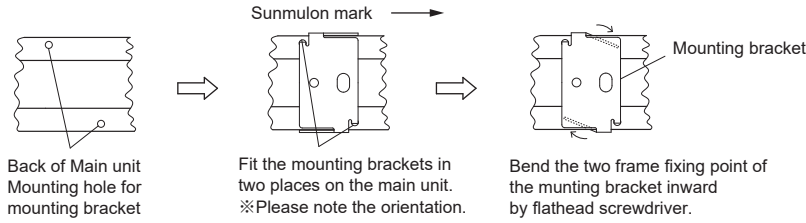
Wire harness Color	Brown	Red	Orange	Yellow
Terminal	—	COM	L1	L2

- ※ Connect with AC Adapter and make short-circuit COM-L1, L2 accordingly.
- ※ Low brightness and simultaneous lighting are not available for AC Adapter type.

MOUNTING INSTRUCTION

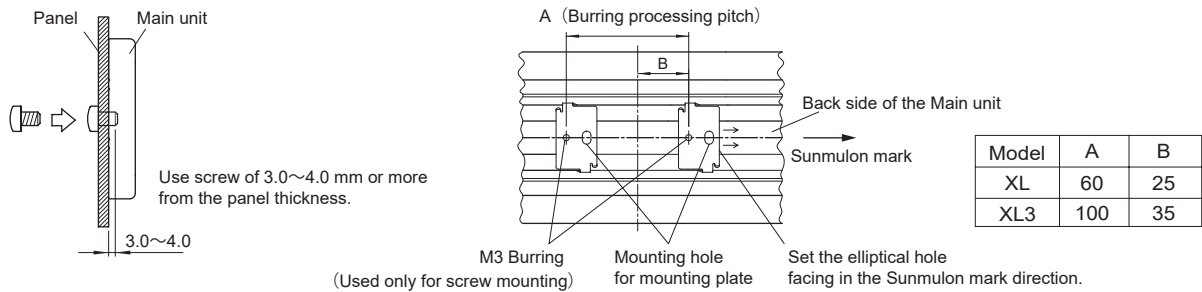
● Using Mounting parts

1. Incorporate the two mounting brackets into the back of the main unit as shown below.
2. Attach the mounting plate to the wall.
3. Slide the mounting bracket on the main unit side into the mounting plate.



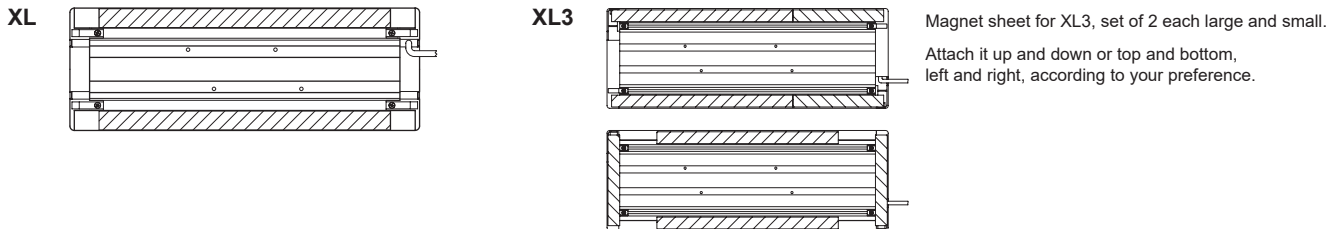
● Using Mounting bracket

1. Incorporate the two mounting brackets into the back side of the main unit as shown above.
2. Drill holes in the panel and fix with M3 screw from the back of the panel to the burring section of the mounting bracket.



● Using Magnet sheet (For easy mounting, when mounting securely, use the mounting parts and brackets.)

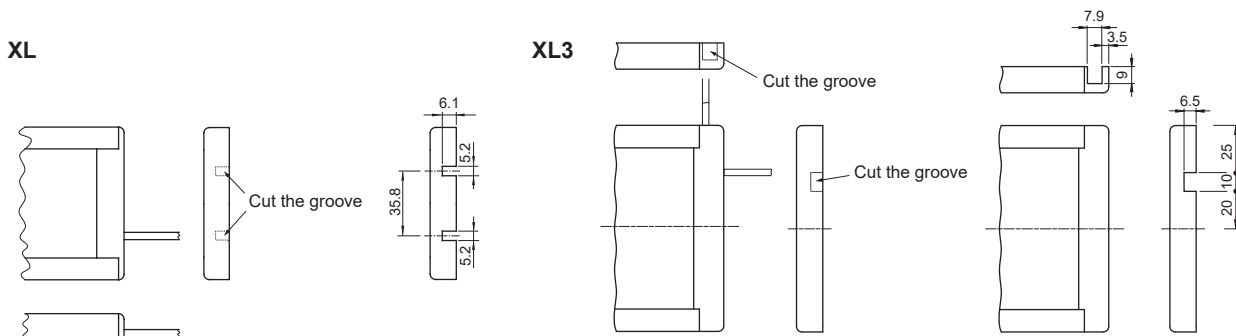
- Attach a magnet sheet with double-sided tape to the back of the main unit.
After pasting, it can be attached to an iron plate etc.
Please refrain from mounting with magnet sheets in locations subject to vibration or shock.



Various methods are available, such as hanging it with string, attaching it with double-sided tape, or standing it up.
Please use your own judgment and take sufficient care to prevent it from falling or being damaged.

● Wire harness

- To exit the wire harness from the side, cut the side part along the inner groove as shown in the figure below.



Tolerance : ± 0.4 mm

PRECAUTIONS FOR CORRECT USE

1. Do not disassemble or modify the main unit as this may cause malfunctions or accidents.
2. Please refrain from mounting with magnet sheets in locations subject to vibration or shock.
3. When wiping off dirt on the of the indicator, wipe lightly with a soft, dry cloth.
Organic solvents such as thinner, benzene, alcohol, or other acidic chemicals may cause deformation, discoloration, or malfunction.
4. For more information about the insert film, refer to page XL·XL-6.
5. Never pull the wire harness attached to the main unit by force, as this may cause malfunction.
6. Handle with care when attaching mounting brackets to the main unit.
7. Do not drop or otherwise apply strong force to indicator.
8. Avoid using the product in places where corrosive or silicon gas is generated, strong alkali, high-acid substance adhere.
9. Be careful of electrostatic breakdown when handling.

※ For handing instructions and precautions other than the above, please refer to "Safety Precautions for All Indicators".

Safety Precautions for All Indicators

1. Notes on contents of Catalogs

- (1) Rated values, performance values, and specification values of Sunmulon products listed in this catalog are values acquired under respective conditions in independent testing, and do not guarantee values gained in combined conditions.
- (2) The ambient operating temperature(humidity) is guaranteed by evaluation based on characteristics, and does not guarantee continuous use for a long period of time near the upper or lower limit of the ambient operating temperature(humidity) or permanent use at that temperature(humidity).
- (3) Reference data and reference values listed in catalogs are for reference purposes only, and do not guarantee that the product will always operate appropriately in that range.
- (4) The specifications / appearance and accessories of Sunmulon products listed in catalogs are subject to change or termination of sales without notice, for improvement or other reasons.
- (5) The content of catalogs is subject to change without notice.

2. Note on applications

- (1) If using Sunmulon products in combination with other products, confirm the following suitability by yourself. Sunmulon shall provide no guarantees regarding the combination suitability.
 - (a) Regulations, standards, or laws to which your machinery, equipment, etc. must conform
 - (b) Functionality and safety of your machinery and equipment
- (2) Wiring and installation that ensures the Sunmulon product used in your system, machine, device, or the like can perform and function according to its specifications.
- (3) When using Sunmulon products, be cautious when implementing the following.
 - (a) Use of Sunmulon products with sufficient allowance for rating and performance.
 - (b) Safety design, including redundant design and malfunction prevention design that prevents other danger and damage even in the event that Sunmulon product fails.
- (4) Sunmulon products are designed and manufactured as general-purpose products for general industrial products. They are not intended for use in the following applications, and in the event that you use Sunmulon product for these applications, unless otherwise agreed upon between you and Sunmulon, Sunmulon shall provide no guarantees whatsoever regarding Sunmulon products.
 - (a) Safety devices intended for human body protection
 - (b) Direct control of transport equipment (railroads / airplanes / ships / vehicles / vehicle instruments, etc.)
 - (c) Space equipment, submarine equipment
 - (d) Nuclear power control equipment, radiation related equipment
 - (e) Combustion equipment, electric heat equipment
 - (f) Disaster prevention and security equipment
 - (g) Elevating equipment
 - (h) Amusement facilities
 - (i) Facilities subject to government or industry regulations
 - (j) Use in applications that require a high degree of safety, any other equipment, instruments, or the like that could endanger life or human health

3. Warranty

- (1) The warranty period for Sunmulon products shall be 1 year after purchase or delivery to the specified location.
- (2) Warranty scope should a failure occur in Sunmulon product during the above warranty period for reasons attributable to Sunmulon, then Sunmulon shall provide that product, free of charge, the same quantity. Further, in no event shall liability of Sunmulon exceed the individual price of the product on which liability is asserted.
- (3) Failures cause by the following reasons shall be deemed outside the scope of this warranty.
 - (a) The product was handled or used deviating from conditions / environment listed in the catalogs
 - (b) The failure was caused by reasons other than Sunmulon product
 - (c) Modification or repair was performed by a party other than Sunmulon
 - (d) Replacement of maintenance parts, installation of accessories, or the like was not performed properly in accordance with the user's manual and catalogs
 - (e) The failure could not have been predicted with the scientific and technical standards at the time when the product was shipped from Sunmulon
 - (f) The failure was due to other causes not attributable to Sunmulon (including cases of force majeure such as natural disasters and other disasters)
- (4) The warranty listed in this Safety Precautions is the full and complete warranty for Sunmulon products, and Sunmulon shall bear no liability whatsoever regarding special damages, indirect damages, incidental damages, or passive damages that occurred due to Sunmulon product.

4. Handling precautions for indicator

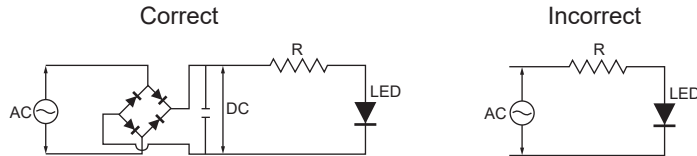
- (1) Wire the terminals with correct polarity. Connecting connectors backwards may cause a power short, resulting in burnout.
- (2) Turn off the power to the product before starting installation, removal, wiring, maintenance, or inspection. Failure to turn power off may cause electrical shock or fire.
- (3) Be careful of electrostatic breakdown when handling.
- (4) Do not drop or otherwise apply strong force to the indicator.
- (5) Do not place heavy objects on the indicator.
- (6) Do not operate or use the housing by itself. Use the indicator with assembled the cover.
- (7) When removing the cover and filter, using a sharp object (screwdrivers, tweezers, etc.), hard object (metal, etc.), or with a large or sudden force, may cause deform or damage the indicator.
- (8) Do not use the indicator under loads that exceed the rated capacity or other ratings. Doing so may result in burnout accidents.

Safety Precautions for All Indicators

- (9) Assemble correctly according to the handling instructions. Do not assemble or disassemble the product other than as described in the catalog, as this may cause defects or accidents.

(10) Illumination

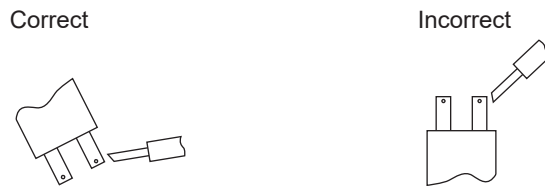
- (a) Do not apply a voltage between the LED terminal that is greater than the rated voltage. Doing so may damage the LED, cause lighting failure.
(b) LEDs cannot be lit directly by AC circuit should be provided rectifier smoothing circuit for products other than AC input type.



- (c) When wiring, pay attention to the polarity of the terminals.
(d) Simultaneous lighting may not be possible with Dual-Color, 3-Color illumination or Split-Face illumination, check the catalog.
(e) Apply voltage directly to LEDs of Non-built-in resistor type will damage the LEDs, so connect an appropriate external resistor.

(11) Wiring

- (a) When tightening terminals or connecting connectors, do not apply more force than necessary from the back side. Support the indicator with one hand as it may slip out of the front of the panel.
(b) Use the applicable connectors listed in the catalog for each model.
(c) Do not apply a soldering iron to the indicator housing. Doing so may deform the terminals and cause defects.
(d) Hand solder with the terminals facing down to prevent flux from penetrating into the indicator.



- (e) Use the appropriate wire size for the applied voltage and current, and solder properly. Use of the product with incomplete soldering may cause abnormal heat generation, resulting in a fire hazard.

(12) Usage environment

- (a) Do not use in the presence of flammable or explosive gases such as gasoline, thinner, LPG, etc.
(b) Avoid using the product in places where corrosive or silicon gas is generated, high temperature, high humidity, sea breeze or direct sunlight.
(c) Provide appropriate protection when using the product in places where it is exposed to water, oil, metal powder, or dust.
(d) Do not use the product in a place subject to vibration or shock. It may cause malfunction or damage.
(e) When installed in a close grouping or continuously lit, the ambient temperature may exceed the specified value due to heat generation. Take measures such as ventilation and lowering the operating voltage.
(f) When checking the actual equipment, load conditions and operating environment should be the same as the actual operating conditions.
(g) The ambient temperature for storage is -25°C to 65°C (No freeze, no condensation).

- (13) When wiping off dirt on the indicator, wipe lightly with a soft, dry cloth. Organic solvents such as thinner, benzene, alcohol, or other acidic chemicals may cause deformation, discoloration, or malfunction.

- (14) Store the product away from malignant gases, dust, high temperature and high humidity, and keep it in our packing condition.

(15) Periodic inspection and replacement

- (a) Although mechanical and electrical durability are listed in the specifications column, deterioration of various parts (deterioration of resins and corrosion of metal parts) is possible due to the operating environment and method of use. We ask that you implement inspections for Sunmulon products to prevent accidents from occurring by conducting periodic inspections and replacements.

(16) Service scope

- The price of Sunmulon products do not include the cost of services, such as dispatching technicians.